

Abstract

An air boost device such as a turbocharger, wherein the compressor wheel thereof is re-designed to permit die inserts (20), which occupy the air passage and define the blades (4, 5) during a process of forming a wax pattern (21) of a compressor wheel, to be pulled without being impeded by the blades. This modified blade design enables the automated production of wax patterns (21) using simplified tooling. The compressor wheel improves low cycle fatigue, withstands high temperatures and temperature changes, and permits operation at high boost pressure ratio while, on the other hand, having low weight, low inertial drag, and high responsiveness.